A Critical Pragmatic Approach to Technology in Music Education: Response to John Kratus' "Transitioning to Music Education 3.0"[1]

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I would like to thank John for his presentation, Mitch for the invitation to serve as a discussant, and Peter and Joanne for sharing this session.[2] I would also like to note that this response is posted on my website with additional references and footnotes, and I invite you to follow up and continue the discussion.[3]

A cartoon from the New Yorker illustrates our challenge.[4] The caption reads, "Come on, we're all going to sit around the campfire and play our iPods." It shows tensions music educators face; between technology and tradition, the guitar and the iPod, music as social and music as merely sonic. Since his "Tipping Point" piece (Kratus, 2007), John has beckoned us to acknowledge these tensions and venture forth into new territories, coming back to our classroom campfires with new experiences and ideas.

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[1] John's talk was given on October 7, 2011, at the CIC/New Directions conference at Michigan State University. Peter Webster, Joanne Rutowski, and I served as respondents.

[2] This talk was shaped with feedback from students in Nick Jaworski's class MUS 243, as well as students in my class MUS 533. In addition, Channing A. Paluck provided extensive comments on several drafts. Many thanks to each and every one of them for their help.

[3] http://www.matthewthibeault.com

[4] The cartoon is here: http://www.cartoonbank.com/2009/come-on-were-all-going-to-sit-around-the-campfire-and-play-our-ipods/invt/133076/

John explicitly frames his talk with a technological metaphor—"Music Education 3.0." This metaphor calls to mind computer programs, and since a point-zero release of an app is always buggy, we serve as beta testers, here to play with and debug the program.

I agree with much of what John says, and try in my teaching to put into practice a similar approach, where participatory music experiences are structured through a ubiquitous learning paradigm (Thibeault & Evoy, 2011). Here's a photo of a sing-along my class gave two weeks ago, partnered with a local elementary school. But given the time constraints, I will focus on two bugs in Music Education 3.0, theoretical points of friction that have broad practical consequences. First, I read John's position on technology as utopian, and I'll argue for caution and a critical approach. Second, I read John's position as deterministic, and I'll argue for a pragmatic approach, with sound recording as an example.

Beyond utopianism: some concerns with technology

The first bug I'll discuss is John's utopian vision for Music Education 3.0. He speaks eloquently about what technology might bring, with his only complaint that the old regime is taking too long to go away. John writes about technology in an entirely positive manner. While technology undoubtedly brings much to celebrate, I believe that without a critical perspective it will amplify rather than eliminate our field's central problems.[5] For example, here are two areas of concern.

[5] For more on critical theory of technology, see Feenberg (2005) and Nichols & Allen-Brown (1996).

One concern is that digital technology instantiates bias and is not value-neutral. Media scholar Lisa Nakamura (in press; 2007) has pointed out the many unsettling ways that digital media such as avatars constrain users to highly normative conceptions of race, gender, sexuality and body type. And music technology consistently privileges Eurocentric notions via software that require the user to define projects in Western terms, for example key, metronomic tempo, and the 12-tone chromatic scale (Thibeault, in press a). Jaron Lanier (2011) points to the technological lock-in of the MIDI protocol, which bypasses the tonal richness of the world's voices and instruments, instead limiting users to the metaphor of the piano keyboard. A critical perspective lets us uncover and resist biases like these that are baked deeply into technology.

Another concern is the proprietary nature of technology. It's one thing to teach someone notation using staff paper, but quite another to learn about this through commercial software like Finale or Sibelius. The educational philosopher Michael Peters (2010) notes that efforts to promote digital learning can be:

> "…the quickest way of handing public education over to the new, technoscientific, global information conglomerates whose profit margins dictate planned obsolescence and an endless product cycle of innovation and fashion" (p. 68).

Even if all the good John foresees comes to pass, we need to be critically aware of the pitfalls. Because of the values embedded in digital technology, the problems we

already have in our profession will become much worse unless we confront this bug as we move forward.

Contrasting deterministic and relational views of technology

The second bug I'd like to draw attention to today is technological determinism, the view that technology has predictable and unchangeable effects independent of our actions. This view is found in scholars like Jacques Ellul (1964) and Marshall McLuhan (1964/2003), and John's writings and presentation have an implicit deterministic structure. John's work also contains explicit statements such as today's slide which read, "Technological advances have changed the ways people create, perform, share, and listen to music" or from the Tipping Point, "Technology has forever changed the experience of music" (2007, p. 45). These claims are deterministic because they are phrased in one-sided ways—that the *technology itself* determines changes in music that subsequently change us. Claims like this put humans in a passive role, adjusting to the changes technology causes. [6]

A promising alternative to determinism is a pragmatic view, a Deweyan interactional and relational approach (Blacker, 1993; Hickman, 1990, 2001; Waddington, 2010). This approach invites attention to the other driver of change—us. The pragmatic view holds that change comes from the interplay of our wants, needs, values, and practices as they co-evolve with technology. This view moves beyond slogans such as "technology changes music" toward the assertion that we change and are changed by, through, and with technology. Technology comes *from*

[6] For a classic critique of technological determinism, see Ch. 5 of *Television: Technology and cultural form* (Williams, 1974/2003).

us—it is not something done *to* us. We are active agents enmeshed in social action and struggle, with skin in the game.[7]

A pragmatic account of sound recording

To illuminate this pragmatic perspective, let's examine the changing wants, needs, values, and practices around sound recording. Jonathan Sterne (2003), writing in the emergent field of sound studies, locates the emergence of sound recording after the Civil War as part of a broader need for preservation also filled by canning fruit and embalming humans. Early innovators saw its value primarily for business dictation, downplaying the opportunity to record music and failing to imagine mass reproduction. Musicians' use of recordings helped to drive new wants, needs, values and practices. Recordings bequeathed permanence to music while removing it from a context with a social focus—the concert. Left only with sound, new aesthetic values emerged to usher in a rise of the notion of music more sonic object than social experience.

I have written of John Philip Sousa and Glenn Gould as emblematic of this transition from social to sonic (in press b).[8] The supreme reality of music for Sousa was the concert. He refused until two years before his death to participate in recordings, which he disparaged as "machine music" (1906). For Gould, by contrast, the supreme reality of music was the recording (Gould, 1984b). He retired from concerts in 1964, disparaging them as "immoral" and "voyeuristic," (Gould, 1984a)

[7] I am deeply indebted to Nick Burbules for allowing me to audit his course on philosophical issues in educational technology. Nick is a wonderful exponent of the pragmatic approach.

[8] In addition to the paper I have in press, I have another out for review that focuses exclusively on sound recording and music education. Contact me if you'd like to receive a copy.

never again giving or even attending a concert over the final 17 years of his life.[9] The shift from concert to recording, from a social to a sonic focus, is undoubtedly one of the most profound in the history of music, and our understanding of this is enhanced by a pragmatic appraisal of changing wants, needs, values, and practices that emerged from the interplay of human action and technological innovation.

John speaks about the recent emergence of Music Education 3.0, but I locate our situation within this continuity over the past century. I posit eras that draw attention to the shifting locus of musical experience: a performance era that ends around Sousa's time and which gradually gives way to a recording era as exemplified by Gould. In recent decades I believe this recording era has transitioned to a postperformance era, where most of our experiences come through recordings—recordings edited, synthesized, and sampled to such a degree that there is no performable analogue. Where once recordings captured performances, new practices de-coupled music from performance. There is no meaningful performable analogue to Jimi Hendrix's backwards guitar solos, or Stevie Wonder harmonizing with his own voice while playing every instrument, or of the synthetic soundscape created within Lady Gaga's hits. Performance continues to exist, of course, in a postperformance era, but it is no longer the locus of musical experience, and in fact for much music today the authentic version is the recorded version. Let

[9] I'm taking a bit of poetic license for the sake of a good story here. Gould late in life admitted a single exception, "I haven't been to a concert since 1967, when, under considerable pressure, I attended a friend's recital" (1984, p. 451).

me repeat that last point: for much music today the authentic version is the recorded version, with performance a secondary substitute.

Our task in music education, then, is to help shape today's changing wants, needs, values, and practices to lead to more generous conceptions of music, musician, and audience. We live in a postperformance era where music *is* computer data. As the Kaiser Family Foundation (Rideout, Foerh, & Roberts, 2010) notes, the average 8- to 18-year old spends nearly eight hours of each day with media, nearly a third of that time in a multitasking manner. Ours is an era shaped by the unprecedented ability to edit and manipulate recordings using Pro-Tools or AutoTune, creating hundreds and even thousands of enhancements per minute, enhancements that drive expectations for similar perfection in live performance. If this music school is like most, recitals here are dominated not by joy, but by the anxiety of falling short of the perfection of recordings, a reality that reflects how technology is not about iPods but about a way of thinking that colors all our experiences with music.[10] Ours is an era of listening organized by databases that deconstruct albums and make recommendations by statistical referral. The rise of the postperformance era puts concerts in competition with the ability to listen to nearly everything ever recorded at home whenever one desires via YouTube, Spotify, and Pandora. This is the world in which we live, teach, and make music, and these aspects only begin to suggest changes we must address as music educators.

[10] This point is based on Heidegger (1954/1977) and Borgmann (1984).

Questions for discussion

Given the critical and pragmatic concerns I have outlined today, I believe two questions help debug Music Education 3.0. The first is: How will we instill a critical perspective toward technology within music education? How, indeed, can we draw attention to the biases, to the commercialization and profit motives, to the many dilemmas inherent in all music in a technological postperformance era? Our efforts can uncover the biases and power imbalances against which we must struggle, as well as help develop habits among students and teachers to critically question technology so that they can promote positive change.

The second question is: How will we resituate our performance-based programs for a 3.0/postperformance era? How can we keep performance, but focus on the unique contributions that it makes to our lives? How will we make room in our programs to connect to the kinds of creativity John envisions?

In closing, I believe that the immense value of John's work has been to tell the profession, "Wake up!" He makes clear that music education, despite the advertising, is rarely yet a 21st century subject. But he shows that it could be, with our attention and involvement, with critical thinking and careful listening. It is exciting that we, together, may continue a wonderful journey toward musical pleasures we can only just begin to imagine. And finally, thank you all very sincerely for your attention and for the chance to share these ideas.

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